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by **Schneider** Electric

## Sphere System

Instruction Manual

# Sphere

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## Product Overview

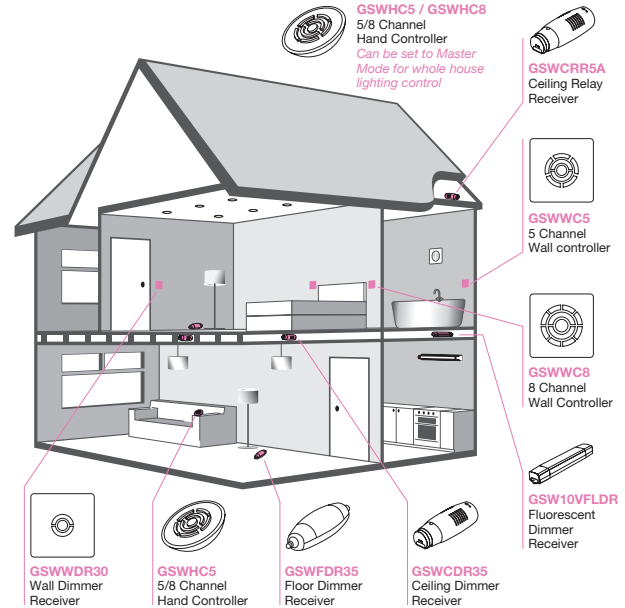
Congratulations on Purchasing the GET **Sphere** lighting control system.

The style and ambience of a single area, room or a whole house can be changed at the touch of a button, using the latest in automated control.

All products in the **Sphere** range are wireless and modular, designed to compliment lifestyle choices, increasing control and comfort in any room environment such as the home, hotel rooms or other similar spaces.

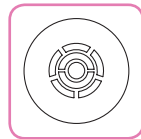
Employing advanced wireless technology, the battery operated Controllers can be used almost anywhere. The Receiver units, controlling lighting and other types of load, give simple but effective control over the ambience of rooms and other spaces.

This manual explains how to set up the **Sphere** system and how to get the best experience from it. If questions or problems arise please read the FAQ's at the back of this manual and on our website [www.getplc.com/sphere](http://www.getplc.com/sphere)



## The Sphere Product Range

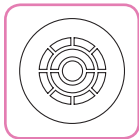
The Sphere range currently offers the following products:



### GSWHC5 / GSWHC8

#### Wireless Hand Held Controller

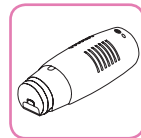
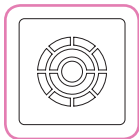
- For use with Sphere Receivers
- Can be used as a Master Controller
- **GSWHC5** - For 5 channel dimming / scene control and other devices
- **GSWHC8** - For 8 channel dimming / scene control and other devices



### GSWWC5 / GSWWC8

#### Wireless Wall Controller

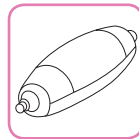
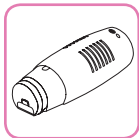
- For use with Sphere Receivers
- Can be used as a Master Controller
- **GSWWC5** - For 5 channel dimming / scene control and other devices
- **GSWWC8** - For 8 channel dimming / scene control



### GSWCDR35 / GSWCRR5A

#### Wireless Ceiling Receivers

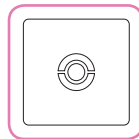
- For use with Fixed Ceiling and Wall Lights
- Available in Dimmable and Relay versions
- **GSWCDR35** - Dimming version controls 20W/VA – 350W/VA
- **GSWCRR5A** - Relay version for 5 amp on/off switching (2 amp motor load)



### GSWFDR35

#### Wireless Floor Receiver

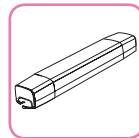
- For use in portable applications
- 1 metre cable from Receiver to BS 1363 plug fused at 5 amp
- Dimming version controls 20W/VA – 350W/VA



### GSWWDR30

#### Wireless Wall Receiver

- With integral dimmer control
- Dimming control for 50W/60VA – 300W/VA
- Requires 35mm wall box
- Operates with 5 and 8 channel controllers



### GSW10VFLDR

#### Fluorescent Dimmer Receiver

- For use with Fluorescent Lighting
- 0 – 10V output
- Must be used with dimmable lighting ballast
- Fits into batten fitting

For full details of compliant lamp and other load types for the above receivers see page 34–35.

## Additional Finishes

By using face plates with alternative finishes, wall mounted Sphere components can be matched to the comprehensive range of GET *Ultimate Screwless Flat Plate* wiring accessories.

The following optional 1 gang face plates are available to purchase separately for use with Sphere 5 or 8 button controllers:

Dimensions: 88mm x 88mm



1 GANG FACE PLATES		
FINISH	5 BUTTON	8 BUTTON
Black Nickel	GSW1GFP5BN	GSW1GFP8BN
Pearl Nickel	GSW1GFP5PN	GSW1GFP8PN
Polished Chrome	GSW1GFP5PC	GSW1GFP8PC
Stainless Steel	GSW1GFP5SS	GSW1GFP8SS
Polished Brass	GSW1GFP5PB	GSW1GFP8PB
White Metal	GSW1GFP5PW	GSW1GFP8PW

2 gang plates are also available in the various finishes for retro-fitting a single Controller module into a 2 gang wall box, e.g. where a 3 or 4 gang dimmer is to be replaced. To use 2 gang plates see the '*Flush mount*' instructions on page 16.

These plates come complete with a 2 gang grid mounting frame for 5 or 8 button controllers:

Dimensions: 148mm x 88mm



2 GANG FACE PLATES		Alternate plates for Wall Dimmer Receiver GSWWDR30
5 BUTTON	8 BUTTON	
GSW2GFP5BN	GSW2GFP8BN	GSWWDRFPBN
GSW2GFP5PN	GSW2GFP8PN	GSWWDRFPNN
GSW2GFP5PC	GSW2GFP8PC	GSWWDRFPNC
GSW2GFP5SS	GSW2GFP8SS	
GSW2GFP5PB	GSW2GFP8PB	
GSW2GFP5PW	GSW2GFP8PW	

## Important Information - Read before commencing installation

### Maximising Sphere Performance and Reliability

Sphere is a radio frequency wireless system, similar to Wi-Fi and Bluetooth and can similarly be affected by the surrounding environment. To ensure maximum performance, avoid installing Sphere receivers where the wireless signals between the controllers and receivers may be shielded or disrupted by building materials such as metal foil faced dry lining or ceiling board, metal foil faced insulation blocks, metal ceilings, walls and floors, metal building frameworks, metal cupboards and shelving, high efficiency double glazing and the like. The wireless signal will travel effectively, without significant signal loss, through a single ordinary plasterboard partition, stud wall, wooden floor etc. However all variants of hard building materials such as brick, block, stone and concrete will reduce the useable range. Range related issues show as erratic

response i.e. loads randomly failing to change in response to controller commands. As with other remote control systems the usual method of overcoming this is to move closer to the affected Receivers and/or by repeating the command.

Typical expected range for 90% reliability: 30 metres line of sight in open conditions.

Following the advice below will enable the best performance to be achieved.

#### Always:

- Strip the input and output cable insulation to stated lengths.
- Ensure input and output connections are tight.
- Use the cable clamp provided.
- Re-fit the Receiver end caps after wiring.
- Ensure the antenna is kept straight when placing Receivers in their final position.
- Try to keep at least 10cm between Receivers if installing more than one in an enclosure or distribution board.
- Ensure enclosures for Receivers have adequate ventilation.

- Try to ensure that the Receivers are not subjected to strong local radio frequency fields from equipment such as CB sets, HAM radio, walkie-talkies, emergency services radio networks etc.
- In ceilings position the Receiver at least 20cm from recessed luminaires and lighting transformers.
- Replace the batteries in Controllers if, in normal use, either or both Controller LED's flash when any button is pushed (see page 36).
- Use cable exceeding 1.5mm<sup>2</sup>.
- Place receivers inside metal enclosures.
- Place Floor Receivers under soft furnishings, adjacent to sources of heat or where a trip hazard could result.
- Locate Receivers adjacent to other electronic equipment such as Wireless routers, Modems, Wireless alarm systems, cordless phones etc.
- Position Receivers where they may come into contact with water, dust build up, building debris, paint etc.
- Locate Receivers in conditions where they could be affected by condensation or frost.

#### Do Not:

- Shorten the Receiver or Controller antennas or remove the antenna insulation or make any connection to the antennas.
- Attempt to operate Receivers from the output of a preceding Receiver.
- Connect a load type other than that specified for the particular Receiver\*.
- Exceed the maximum rated connected load of Receivers\*.
- Loop in/out on Receiver terminals – always use a separate junction box.

#### Avoid:

- Inferior economy or unbranded mains voltage incandescent or halogen lamps.
- Low cost dimming electronic transformers.

\* For Receiver loading and load type compatibility see pages 34–35.

## Safety and Installation Warnings

Read these warnings fully before starting work and keep them for future reference.

**Note that Sphere is not compatible and cannot be used with the GET Smart system.**

Before commencing installation please refer to the individual Sphere Installation and User Guides supplied with the Receivers for installation guidance.

These products should be installed in accordance with the applicable parts of the Building Regulations, and the current edition of the IEE Wiring Regulations (BS 7671: Requirements for electrical installations) and appropriate statutory regulations.

In the Republic of Ireland the installation must be in accordance with the ETCI National Rules for Electrical Installations – ET 101.

Before commencing work, switch OFF the mains supply and remove appropriate fuse or switch off the circuit breaker.

## When modifying an existing installation to use the Sphere system

Check that the existing electrical and lighting installation is safe and working correctly before modification.

If there is any doubt how to proceed, consult a qualified electrician.

## When creating a new installation with Sphere

Sphere can be used to create a lighting installation without the necessity of conventional switch points. However it is recommended that provision is made available for the installation of at least one switch point in each room or space that uses Ceiling Receivers to aid removal in case future occupiers want to revert to a conventional system.

## Outdoor Lighting Applications

All outdoor garden installations must be installed in accordance with IEE Regulations for Special Installation Requirements. A 30mA RCD (Residual Current Device) should always be placed between indoor and outdoor electrical circuits, including the initial connection to an outdoor transformer used for Low Voltage lighting.

Note that the Floor and Ceiling Receivers do not have enhanced IP ratings. They should be either wired such that they are located indoors or, if required to be located outside, housed in a suitable weatherproof enclosure of at least IP56 rating. Outdoor enclosures must be constructed and located such that the Sphere receivers cannot overheat - for example, not in direct sunlight.

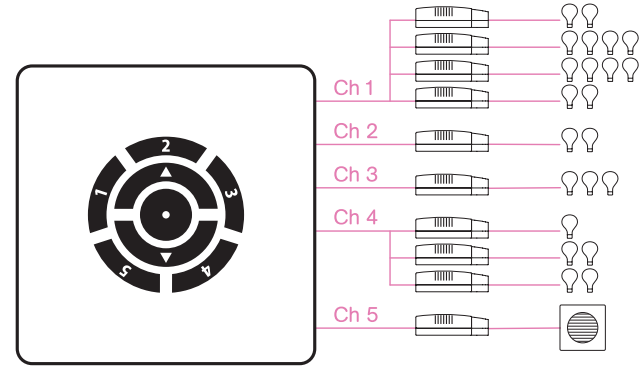
## Installation Information

Install and set-up (see page 20) one room at a time. All lighting and other loads to be controlled must be connected to a Receiver. The Controller(s) send signals to the Receiver(s) and these in turn alter the state of lighting and other devices attached to them.

There is no limit to the number of Receivers on each channel, but each individual Receiver has a maximum load that should not be exceeded (see pages 34-35 and the appropriate Installation and User guide).

The maximum line of sight range is 30 metres. It is always good practice to mount wall controllers, wherever possible, such that no Controller is more than 30 metres from Receivers. If Sphere is to be installed in more than one room refer to section '*Setting the Function Switches for Different Rooms*' on pages 30-31 before starting installation.

## Visual Representation of Channels





## Wall and Handheld Controller Installation and Set-up

**Wall and Handheld Controllers** are programmed and operated in the same way.

### Wall Controller

If positioning in an existing switch location all cables must be made safe before proceeding.

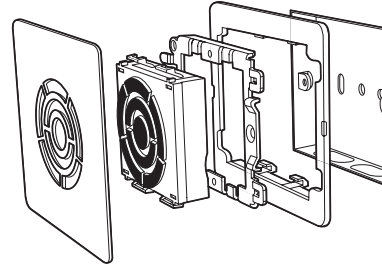
The Wall Controllers are supplied with 2 different fixing options, flush or surface. Please select the best method for the situation.

### Flush Mount

Flush mounting requires the use of the Grid frame supplied with the product to mount the Controller into a wall box, as used to house standard light switches. This method is ideal when an existing light switch is to be replaced as it will avoid any additional decorating. The unit will fit into a 16mm deep box when terminated conductors are not present.

Fitting Instructions:

1. Check the wall box and reposition any terminated conductors and terminal blocks to ensure that they do not interfere with the mounting of the Wall Controller.
2. For installations in metal 1 gang 4 lug boxes the top and bottom lugs will need to be removed or bent inwards and out of the way.
3. Remove the face plate prior to installation by inserting a small flat blade screwdriver into either of the two slots on the side of the plastic frame and gently prising off the metal plate.
4. Install the grid frame in the wall box using the screws provided. The Wall Controller module comes assembled to the grid frame. This may be removed to make installation easier. To remove the Control module pinch the clips at the top and bottom of the Control module and pull it forward. When the frame is installed the module can be pressed back into place. Align the orientation of the module with the frame (marked TOP).



5. For best performance in both metal and dry lining boxes, extend the antenna outside the box through a knock-out into the wall cavity.
6. Clip the metal front plate onto the grid frame.

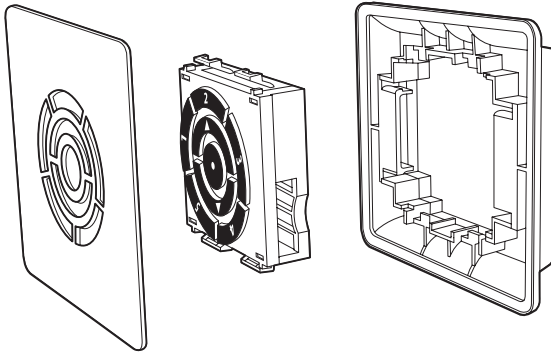
### Surface Mount

Surface mounting the Wall Controller using the pattress supplied avoids the necessity of cutting a recess in the wall. This enables location of the Controller on virtually any surface, particularly on difficult surfaces such as glass, tiles, stone walls etc. The Grid frame is not used.

Fitting instructions:

1. Initially remove the face plate by inserting a small flat blade screwdriver into either of the two slots on the side of the plastic frame and gently prising off the metal plate.
2. Remove the Wall Control module from the grid frame by pinching the 2 clips at the top and bottom of the unit and pulling the module forward.
3. The Wall Controller pattress can be fixed in place by two alternate methods, double sided tape or screw mounting.

4. For a surface that cannot or should not be cut or where damage is undesirable the pattress can be secured by using the double sided tape included. Ensure surfaces are flat, clean, and dry and dust free.
5. For screw mounting, choose a location for the pattress ensuring there are no cables or pipes beneath the intended mounting position. From the inside of the pattress drill through the circular recesses using a 3.5mm drill. Using suitable screws and wall plugs if necessary (not supplied), mount the pattress in position making sure 'TOP' is uppermost.
6. After fixing the pattress in position, insert the wall module into the pattress ensuring that the buttons are facing the correct way, both pattress and module are marked 'TOP' and refit the front plate.

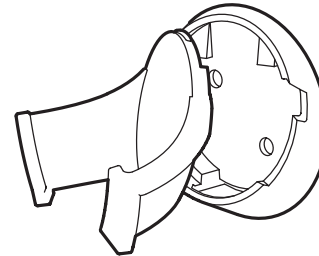


### Handheld Controller

Whilst designed for portable use, the Handheld Controller can be wall mounted using the bracket supplied.

#### Fitting instructions:

1. Choose a location for the bracket. Ensure that there are no hidden cables or pipes beneath the intended mounting position.
2. Pull apart the two sections of the wall bracket which are held together by a 'snap fit'. They are designed to pull apart. (This acts as a safety feature when they are on the wall.)
3. Holding the rear section of the bracket against the wall, mark the desired position of the screw holes on the wall.
4. Drill suitable holes and fit wall plugs (6.5mm for the supplied plugs) as necessary to suit the wall type.
5. Screw the rear section of the bracket to the wall.
6. Click the front section back onto the rear section.



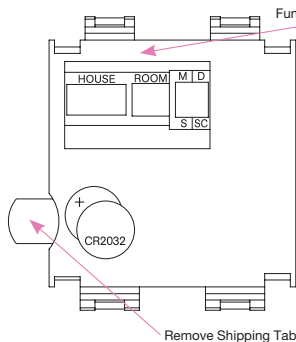
## System Set-up

Before starting the set up process remove the battery shipping tabs from the Controllers. These are located in the battery holders (see page 36) of both types of Controllers. Should the tabs be missing test the Controller as described on page 36.

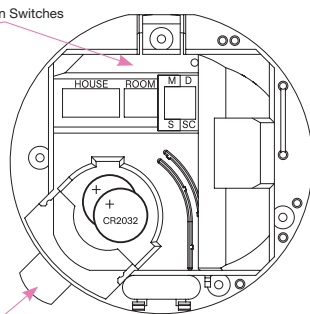
Install the Receivers in line with the relevant installation instructions supplied with the Receivers.

Once installed all the Receivers must be assigned to a channel on a Controller, by 'Setting the Channels', whether it is intended to use the Controller in Dimming mode or Scene mode. A channel functions like a traditional rotary dimmer, allowing alteration of the brightness of any lights attached to it.

BACK OF WALL CONTROLLER :



BACK OF HAND HELD CONTROLLER :



## Controller and Receiver Function Summary:

- A Receiver can be assigned to any one of 8 channels.
- All lights assigned to one channel will operate together.
- Multiple lights can be attached to each Dimming Receiver, up to the load limit of the Receiver, see pages 34–35.
- There is no limit to the number of Receivers that can be assigned to a single channel.
- More than one Controller can be used in each room / area (see page 38).
- Not all the channels have to be used.
- Relay Receivers and the Fluorescent Dimmer Receiver switch the load on at any setting above minimum by using the 'up' button. Pressing and holding the 'down' button will switch the load off.

## Dimming Mode

Once the channels have been set they can be dimmed up and down in much the same way as a traditional multi-way wall dimmer, but wirelessly.

## Scene Mode

Scene Mode is the preferred way to use the Sphere system and enables up to 8 different lighting scenes to be created. A scene is created by adjusting the channels in a 'lighting pattern' or scene and then setting this scene into the memory of the receivers. Each scene is assigned to an individual button on the Controller. Once set any scene can be recalled at the touch of its assigned button.

## Set Up

The following instructions explain how to set the channels and then dim them in one room. Scenes can only be set and operated once the channels have been set. Dimming mode can be reverted to at any time.

## Multiple Room Set Up

Once the first room is working correctly read the section of the instructions called 'Setting Function Switches for Different Rooms' (page 30) that explains the process of setting additional rooms. At least one Controller is required for each additional room. Setting and using a Master Controller for use with multiple rooms follows. The function switches can be found on the back of the Wall and Handheld Controllers (see page 30).

## Setting Channels

To operate the *Sphere* system, it is necessary to 'assign' Ceiling and Floor Receivers to a Controller, linking them together. This has to be done for each Receiver.

### Setting a Channel



#### STEP 1

##### Setting the Controller Mode Switches

Initially the 'Mode' switches must be set as above. If they are not, alter the settings as necessary.

Controllers come with a factory preset house setting. In most cases this will not need to be altered. However if installing multiple room systems, or to use additional Controllers see 'Setting the Function Switches' section on page 30. You will need to make a note of this setting on pages 40–41 and also in the User Guide and store it somewhere safe.



#### STEP 2

##### Assigning the Receivers

Press and hold the button on the Receivers selected for a channel for at least five seconds – The connected lights will flash once and the Blue LED will start to flash. Further receivers can be added to a channel at any time.

##### Notes:

- Relay Receiver**  
LED shows as 'Orange'
- Wall Dimmer Receiver**  
The front button surrounds flash Blue.

#### STEP 3

##### Selecting the Channel

Press button 1–5 or 1–8 to assign the Receivers to that channel. The lights will flash once and then rise. This indicates that the channel has been set.

#### STEP 4

##### Turn off Lights

Press the centre button to turn off lights. Repeat steps 2–4 until all the Receivers have been assigned to channels.

##### General:

- Once set, the channels remain assigned even if the mains supply is removed from the Receivers.
- If a Receiver button is pressed inadvertently during assigning, the Receiver cannot be taken out of assign mode (LED flashing). To overcome this situation, assign the Receiver in another channel and then reassign it to the desired channel.

## Using Sphere Modes

The system has two modes;

- Dimming mode
- Scene mode

### Dimming Mode

Dimming Mode allows manual adjustment of the light levels according to the desired mood. Once in Dimming Mode select the channel to adjust and press the up and down arrows to raise and lower the lighting levels.

Pressing the centre button will turn all lights off or on at maximum and switch relay loads off or on.

### Operating Dimming Mode



#### STEP 1

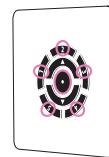
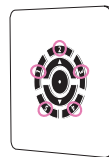
##### Dimming Mode

Ensure the rightmost 'Mode' switch is set to the up position (towards 'D').

#### Notes:

##### Switching non-dimmable lighting and other loads within dimming mode

- The Relay Receiver allows switching on and off of non-dimmable lighting and small electrical devices such as extractor fans.
- To switch non-dimmable loads within dimming mode, select the channel to which the Relay Receiver is assigned, and then press the up / down buttons to turn it on or off. Any setting above zero (with the up button) will switch the load to 'on'.



#### STEP 2

##### Choosing a Channel

Press the chosen channel button. All the lights set on that channel will rise in brightness and relay loads will turn on.

#### STEP 3

##### Dimming the Channel

Use the up and down arrows to set the desired lighting level, this will now remain as set until turned off. Relay loads react as described below.

#### STEP 4

##### Dimming a different Channel

Choose an alternate channel button. Use the up and down arrows as before.

#### STEP 5

##### Turning off Lights

Press the centre button to turn off all channels. Alternatively, pressing the button of an active channel will turn that channel off.

#### Important Safety Note for Relay Receivers

- The Receiver LED is GREEN when the line output is not connected to the line input (the load is not energised). The LED changes to RED when the output is connected to the line input (the load is energised).

##### GSWWDR30 Wall Dimmer Receiver

- As with other Sphere Receivers the GSWWDR30 can be set to a channel. It also has up, down and centre on / off buttons that only control the load directly connected to it. Dimming commands from a Controller will override settings made with these buttons.

## Scene Mode

Scene Mode maximises the flexibility and ease of use that Sphere provides. 'Scenes' are preset lighting schemes and can include the operation of non-dimmable lighting and other switched loads (see Switching below). Scene Mode allows recall of 5 or 8 scenes, depending on the Controller. Changing the whole room to match the activity is easy - brighter lights for reading or working, or lower lights for watching a film or relaxing with friends.

Receivers must have been assigned to channels (see 'Setting Channels') to use Scene Mode.

For safety reasons we recommend that Scene 1 is programmed so that all lights are set to maximum brightness.

### Notes:

Saved Scenes are stored even if the mains supply is removed from the Receivers.

### Switching non-dimmable lighting and other loads within a scene - using relay receiver

- I. For switched loads, the channel with the Relay Receiver should be included when setting a scene.
- II. To switch the load on or off when setting a scene, only use the up / down buttons, do not use the centre button.

### Important Safety Note for Relay Receivers

- III. The Receiver LED is GREEN when the line output is **not** connected to the line input (the load is not energised). The LED changes to RED when the output is connected to the line input (the load is energised).

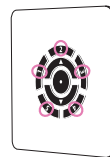
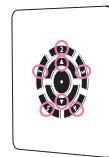
## Setting and Adjusting Scenes



### STEP 1

#### Setting the Mode Switches

All lights must be turned off before altering the Mode switches. The rightmost 'Mode' switch must be set to the down position (towards 'SC'). If scene mode is to be the usual mode this switch will not require any further operation.



### STEP 2

#### Choosing a Scene to Programme

Ensure all lights are turned off. Press and keep holding the desired scene button (lamps will raise). Whilst keeping this depressed, press and hold the up and down arrow buttons for at least five seconds until the Blue Controller and Receiver LED's pulse - lamps will flash once and stay on.

### STEP 3

#### Selecting a Channel

Choose button 1-5 (or 1-8) to select the channel to be adjusted (these are the channels created during 'Setting a Channel') - all the lights on that channel will flash.

### STEP 4

#### Changing Channel Brightness

Use the up and down arrow buttons to adjust brightness of the channel. Repeat steps 3 and 4 until all the channels have been set to the desired light level for this scene.

### STEP 5

#### Saving and Exiting

Press the centre button to save the scene and exit. The first scene has now been set. See 'Operating Scenes', page 28, to view this scene. Repeat steps 2-5 until the desired number of scenes are set, up to 5 or 8.

A scene can be changed at any time by repeating steps 2-5.

### Notes:

- i. Relay Receiver. LED shows as 'Orange'.
- ii. Wall Dimmer Receiver. The front button surrounds flash Blue.

## Operating Scenes



### STEP 1

#### Scene Mode

The rightmost 'Mode' switch must be in the down position (towards 'SC').

### STEP 2

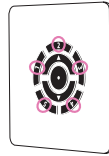
#### Choosing the Scene

Press the button of the scene you wish to use.

### STEP 3

#### Changing Scenes

To use different scenes press other buttons.



### STEP 4

#### Dimming the Scene

Use the up and down buttons to adjust the overall brightness of the active scene.

Note: Holding the up or down button will eventually raise or lower all channels to maximum or minimum. To restore the scene press the relevant scene button.

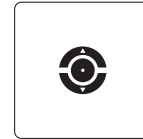
### STEP 5

#### Turning off Lights

Press the centre button.

## GSWWDR30 Wall Dimmer Receiver

As with other Sphere Receivers the GSWWDR30 can be set to a channel. It also has up, down and centre on/off buttons. These only control the load directly connected to it. Commands from a Controller will override settings made with the up and down buttons.



## Setting the Function Switches for more Rooms

Once the first room has been installed, up to 7 rooms can be added to the system using the same House switch setting. This will also give the opportunity to control these rooms using a Master Controller (please see the Master Controller section of the instructions). A Master Controller can be added at any time and will not need any programming.

### House Switches

The house switches on the additional room Controllers should be set exactly the same as the 'Room 1 Controller'.



The house settings above are shown as an example only.

### Room Switches

The room switches on the Controller/s for rooms 1–8 should be set as shown opposite.

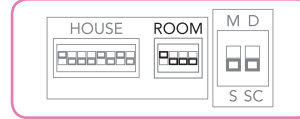
All House switches in the appropriate Controllers must be set exactly the same.

### Mode Settings (Rooms 2–8)

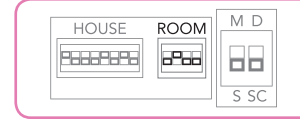
Master/Slave mode switch set to Slave mode – towards S.

Set Dimmer/Scene mode switch as required, see 'Using Sphere Modes', page 24.

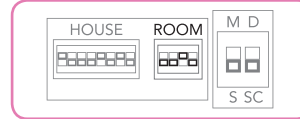
### ROOM 1



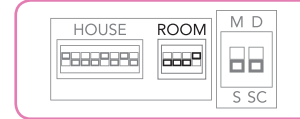
### ROOM 2



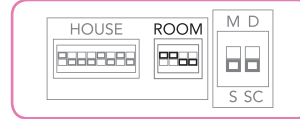
### ROOM 3



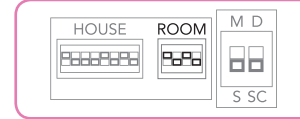
### ROOM 4



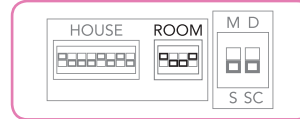
### ROOM 5



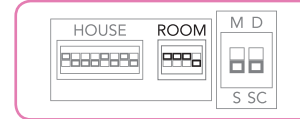
### ROOM 6



### ROOM 7



### ROOM 8

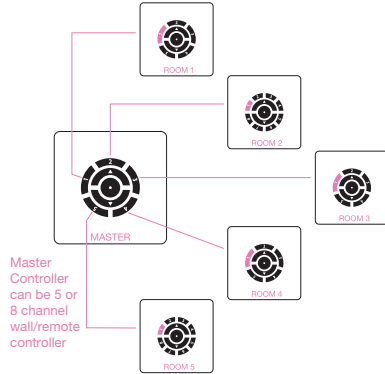




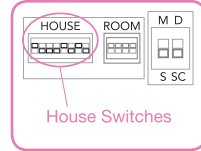
## Master Controller

A Master Controller will control Scene 1, in up to 8 different rooms.

- In order to be able to use the Master Controller two or more rooms must have been set up with the same house code.
- Both Wall and Handheld Controllers can be used as a Master Controller. It is an additional Controller to the others in the system.

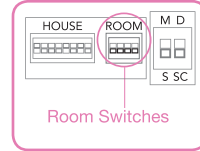


## Setting a Master Controller



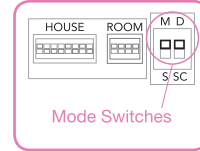
### STEP 1

Adjust the House switches so that they match the House switches on the Controller/s within the rooms to be controlled.



### STEP 2

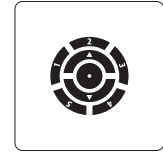
Adjust the Room switches on the Master Controller so they are all in the down position.



### STEP 3

Adjust the Mode switches so that the Master/Slave switch (left function switch) is set to the up position (M). The dimmer/scene switch (the right function switch) should also be set to the up position (D). Master Mode is now set, no programming is necessary.

## Operating a Master Controller



### STEP 4

Press button 1 on the master controller to turn on scene 1 in Room 1, press button 2 to turn on scene 1 in Room 2, etc. Centre button toggles scene 1 in all Rooms on/off.

## Product Specifications and Load Compatibility

Lamp / Load Type	
Low Voltage (12V) Halogen Lamps	Dimming electronic or Magnetic transformer (4)
Mains GLS / Reflector etc, Mains (230/240V) Halogen Lamps (3)	
Linear Fluorescent Lamps	T8 and High Output T5 lamps
Linear Fluorescent Lamps	T4 lamps and T5 4 – 13W lamps
Compact Fluorescent Lamps with separate ballasts	4 pin lamps
CFLi lamps (including those marked 'dimmable')	'Plug-in' Compact Fluorescent Lamps
Light-Emitting Diode (LED) (Solid State Lighting)	Mains voltage lamps
Light-Emitting Diode (LED) (Solid State Lighting)	When used with separate driver
High Intensity Discharge Lamps	
Other Loads: Relay, contactor, ceiling fan, wall fan, extractor fan etc	Motor Load
Luminaires that already incorporate a dimmer	Father / child up lighter etc

- Notes :**
- 1 For higher loads use a suitable contactor
  - 2 Dimmable LED lamps may be suitable for use with Ceiling / Floor Dimmer Receivers, if designed for use with triac (leading edge) type dimmers. Dimmable LED lamps may be compatible with the Wall Dimmer Receiver if designed for use with trailing edge type dimmers.
  - 3 Avoid using inferior economy or unbranded mains voltage incandescent or halogen lamps.

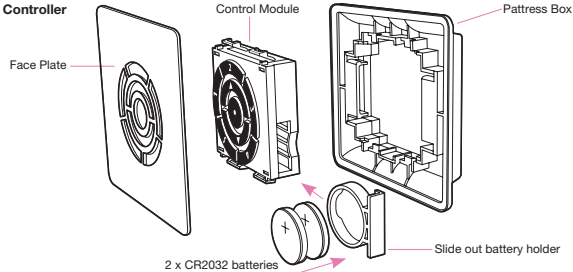
SPHERE COMPONENT			
	DIMMING		SWITCHING
Ceiling/Floor Dimmer Receiver GSWCDR35 GSWFDR35	Wall Dimmer Receiver GSWWDR30	Fluorescent Dimmer Receiver GSW10VFLDR	Ceiling Relay Receiver GSWCRR5A
Min 20W/VA Max 350W/VA	Min 50VA/60W Max 300W/VA	Max 800W / 4 ballasts	Max 5A (2A motor load) (1)
Y	Y - (trailing edge electronic transformers only)	N	Y - on/off only
Y	Y	N	Y - on/off only
N	N	Y (only with 1–10V control electronic ballast)	Y - on/off only
N	N	N	Y - on/off only
N	N	Y (only with 1–10V control electronic ballast)	Y - on/off only
N	N	N	Y - on/off only
N (2)	N (2)	N	Y - on/off only
N	N	Y (with 1–10V control driver)	Y - on/off only
N	N	N	Y - on/off only Max 400W(1)
N	N	N	Y - on/off only
N	N	N	N

- Notes :**
- 4 Using dimming electronic transformers and low voltage halogen lamps eliminates potential end of life issues with mains halogen and incandescent lamps. When dimming with electronic transformers check minimum loading with manufacturer. Do not use toroidal (round shape) magnetic transformers unless specifically stated by the manufacturer to be dimmable. Do not mix electronic and magnetic transformers on the same Receiver.

## Changing Controller Batteries

The expected life of the Controller batteries is approximately 2 years with typical usage. Batteries require replacement when one or both of the Blue LED's on the front of the controller flash when any Controller button is held down. Sphere Controllers require **2 x CR2032** type batteries. Always replace batteries in pairs and from the same manufacturer. Since scene information is held in the receivers, scenes will not be lost during battery changing.

### Wall Controller



### Wall Controller

To access the battery holder remove the control module from either the surface mounting pattress box or the flush mounted grid plate.

First, unclip the face plate from the back box or grid frame.

Remove the control module by pressing the top two clips inwards and ease out the module.

The battery compartment is on the side of the module. Slide out the battery holder from the module casing and invert to release the discharged batteries.

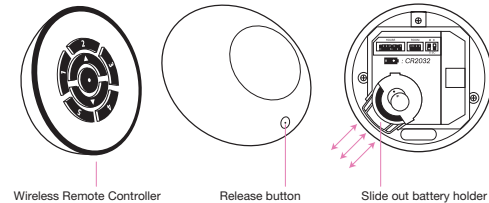
Replace the **2 x CR2032** button cell batteries fitting them both with the positive (+) symbol facing up. **Do not use pliers or tweezers to hold the batteries as this could cause a malfunction.** Slide the battery holder back into the module casing. Ensuring the control module has the 'TOP' mark uppermost, reassemble the Wall Controller.

### Handheld Controller

To change the batteries in the Handheld Controller press in the button located at the base of the back cover and remove it, exposing the battery holder.

Slide out the holder and remove the discharged batteries by inverting the holder. Replace the **2 x CR2032** button cell batteries fitting them both with the positive (+) symbol facing up. **Do not use pliers or tweezers to hold the batteries as this could cause a malfunction.** Slide the battery holder into the Controller casing. Reassemble the Handheld Controller.

### Handheld Controller



## Frequently Asked Questions

### Can I have more than one Controller in a room?

Multiple Controllers can be used to control the same lights in a room (e.g. 1 Wall Controller and 1 Handheld Controller). Controllers are added by simply duplicating the Haze, Room and Mode switch settings on each of the additional Controllers. Note if a Controller sends the same command as the previous command sent from another Controller, there will be no response. A second button push will be required. (This is a result of the last Controller command information being held only in the Receivers). One Controller can dim the channels and an alternate Controller can operate scenes. To do this set the dimming/scene switch to 'D' or 'SC' as required.

### How do I replace a lost or damaged Controller?

If a Controller is damaged or lost, obtain a replacement and find the record made of the switch settings on the old Controller then duplicate these exactly on the new Controller. Since all the channel and scene settings are stored in the Receivers, no reprogramming is necessary.

### Where should I install the Controllers?

Once programming the Receivers has finished, position the Controller(s). As the system is wireless these can be positioned anywhere in the home, taking into account range limitations (page 10). A fixed Controller by the door of every room equipped with Sphere will be easy to find when entering or exiting.

### What is happening if the lighting seems to change by itself?

Sphere control commands are heavily encrypted. As such unexpected changes to the lighting in one or more rooms can only be caused by Sphere Controllers that have the same switch settings being operated nearby, for instance in adjacent rooms or neighbouring apartments that have the Sphere system. The best way to avoid conflicting operation is to plan the switch settings in advance for all adjacent and nearby systems. However it is still possible that interference could occur if a new Sphere system is installed locally. In this case, the House switch settings on the Controller of the affected room(s) will need altering as follows. (Note that access to the Receivers will be required to press the Receiver buttons during this process).

1. Change the coding of the House switches on the Controller of an affected room by moving one (or more) switch to its alternate position. The associated Receivers will no longer respond. Note that at least one switch needs to be in the up position.
  2. Check that the new switch setting does not interfere with other rooms or neighbouring systems.
  3. Once a House switch setting has been found that does not interfere with other Sphere systems the channels of the associated Receivers will need to be reassigned as described in the '*System set up*' section, page 20, in effect starting a new installation. As long as the Receivers are assigned to the same channels as before, stored scenes will not be affected.
  4. If there are more Controllers for the same room, their switch settings should also be updated. Ensure a note is made of the new switch settings.
- d) Ensure there are working lamps running from affected Receivers / in affected channel(s).
  - e) Check the points above, and then gain access to and observe at least one of the Receivers (if installed a Floor Receiver is most convenient) to see if the Receiver LED flashes when the centre button of a Controller is pushed.
  - f) If all checks are OK and the fault still occurs, contact the Helpline, page 43.
2. If any of the lighting loads develop unusual behaviour e.g. flicker or cannot be turned off.
    - a) Check that the relevant connected load is the correct type (pages 34–35).
    - b) Disconnect the supply to the system by tripping the appropriate circuit breaker / removing the circuit fuse, then reconnect the supply by resetting the circuit breaker / replacing the fuse (if in doubt contact a qualified electrician) then operate the system.
    - c) If after carrying out the above the behaviour continues to occur, contact the Helpline, page 41.
- If there are any more questions about the Sphere system or how to use it and to find out about updates and more FAQ's, please visit the website [www.getplc.com/sphere](http://www.getplc.com/sphere)
1. If there is no response to Controller commands.
    - a) Check that the mains supply to the installation is still in place, i.e. no MCB's have tripped.
    - b) Check that the controller LED's light when a button is pushed and that the batteries are OK as described on page 36.
    - c) Ensure no room or house switch has been changed inadvertently.

## Dill Switch Settings

Room	House Code	Room Code	Function
Room 1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room 2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room 3	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room 4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room 5	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room 6	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room 7	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room 8	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room 9	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room 10	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room Master 1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
Room Master 2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

## NOTES :

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## NOTES :

## Important Information

The Sphere Wall and Handheld Controllers, GSW35FDR Floor Dimmer Receiver and the batteries in the Controllers fall within the scope of the Waste Electrical & Electronic Equipment Directive 2002/96 EC. (WEEE)

They should not be disposed of with household waste.

Please recycle where facilities exist. Check with your local authority for recycling advice.

Should any difficulty be experienced with installation or operation of the Sphere system please telephone our **Customer Helpline on 0121 565 7770**

Helpline Hours:

Monday – Thursday 8.30am – 5.30pm  
Friday 8.30am – 4.15pm

Or visit for advice:  
**[www.getplc.com/sphere](http://www.getplc.com/sphere)**

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by **Schneider** Electric

GET Key Point 3-17 High Street Potters Bar EN6 5AJ England  
sales@getplc.com    [www.getplc.com/sphere](http://www.getplc.com/sphere)

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